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REMARKS

This is a timely reply to the Office Action of May 14, 2002. In the Office Action, the Examiner rejects claims 1-3 and 5-20. The grounds for rejection are traversed below.

Claim Amendments

Claims 1-6, 8-11, 13 and 15-16 have been amended to remove reference signs. These amendments do not narrow the scope of the claims.

Claim 4 has been further amended to correct its dependency.

Claim Rejections under 35 U.S.C. 103 (a) over Mermelstein in view of HP-MaxiLife

In section 4 of the Official Action, the Examiner rejects claims 1, 6 and 15 under 35 U.S.C. 103(a) as being made obvious by Mermelstein et al. (U.S. Pat. No. 5,703,629) in view of 'HP MaxiLife: for the Highest Productivity and Reliability' (hereinafter HP-MaxiLife). Specifically, the Examiner asserts that Mermelstein teaches all of the elements of claim 1, except the elements of "an electronic circuit operating independently of said processor and said graphics system" and "the processing being characterized in that said service channel is also used to permit said independent electronic circuit to have access to the On Screen Display (OSD) capability of said at least one display in order to display text and/or graphics independently of said processor and said operation system." The Examiner further asserts that HP-MaxiLife teaches "the use of an electronic circuit (p.2, line 35) operating independently of said processor and said graphics system. The independent electronic circuit uses said service channel to have access to the OSD capability of said at least one display (p. 2, lines 36-37) in order to display text and/or graphics independently of said processor and said operating system. The Examiner then concludes that it would have been obvious to combine the

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hardware monitoring process having On Screen Display capability of HP-MaxiLife into the computer system of Mermelstein in order to maximize reliability and system up-time.

Applicants respectfully disagree with the Examiner. First, Applicants submit that the art relied upon by the Examiner does not teach, disclose or suggest all of the claimed elements of independent claims 1, 6 and 15. Further, Applicants submit that even if the art relied upon by the Examiner does teach, disclose or suggest all of the claimed elements, the combination of the references would not result in the claimed invention.

As noted by MPEP 2143.03, to establish a *prima facie* case of obviousness, all the claim limitations must be taught or suggested by the prior art. The Applicants respectfully assert that the combination of Mermelstein with HP-MaxiLife does not teach all the claim limitations of claim 1. Specifically, the Applicants assert that the combination of Mermelstein with HP-MaxiLife does not teach, describe, or suggest "said service channel is also used to permit said independent electronic circuit to have access to the On Screen Display (OSD) capability of said at least one display in order to display text and/or graphics independently of said processor and said operating system" (emphasis added)

The Examiner states on page 4 of the Official Action that HP-MaxiLife on p. 2, lines 36-37 teaches the independent electronic circuit uses said service channel to have access to the OSD capability of said at least one display. However, HP-MaxiLife does not mention the term OSD or its equivalent. The term OSD is a quite specific term of art referring to the capability of a display device to display foreground texts and/or graphics superimposed on the background displayed image independently of an input graphics signal, see page 8, lines 14-21 of the present application. Thus, HP-MaxiLife does not teach, disclose or suggest "said independent electronic circuit to have access to the On Screen Display (OSD) capability of said at least one display" as is claimed in claim 1. Further, Applicants are unaware where in Mermelstein "said independent electronic

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circuit to have access to the On Screen Display (OSD) capability of said at least on display" as claimed in claim 1, is taught, disclosed or suggested.

In addition, claim 1 claims, in part, "said at least one display receives a graphics channel ... and a service channel." In the Official Action, the Examiner states that the at least one display is the monitor display 190 of Mermelstein. However, the Examiner does not indicate to the Applicants where in Mermelstein a graphics channel and a service channel is taught in relation to the monitor display 190. Applicants are unaware where in Mermelstein the signals to the monitor display 190 are shown or taught. Thus, Applicants submit that Mermelstein does not disclose, in connection with monitor display 190, "said at least one display receives a graphics channel ... and a service channel" as is claimed in claim 1. Further, Applicants are unaware where in HP-MaxiLife "said at least one display receives a graphics channel ... and a service channel". Thus, the combination of Mermelstein and HP-MaxiLife does not teach all of the claim limitations found in claim 1.

Therefore, the Applicant asserts that since the combination of Mermelstein with HP-MaxiLife does not teach all the limitations of claim 1, claim 1 is properly allowable over these references. Further, Applicants submit that, similar to claim 1, the combination of Mermelstein with HP-MaxiLife does not teach, disclose or suggest all of the claim limitations of claims 6 and 15. Therefore, Applicants submit that claims 6 and 15 are also deemed to be patentable over Mermelstein and HP-MaxiLife.

The Examiner asserts that "it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the hardware monitoring process having On Screen Display capability of HP-MaxiLife into the computer system of Mermelstein in order to maximize reliability and system up-time." However, Applicants submit that the combination of Mermelstein and HP-MaxiLife by one skilled in the art would result in at least two display monitors, and not at least one display as is claimed in claim 1.

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As stated in MPEP 2143, "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicants submit that neither HP-MaxiLife nor Mermelstein contain any motivation to combine the references in the manner done so by the Examiner.

First, the Examiner states that the motivation to combine the references is in order to maximize reliability and system up-time. HP-MaxiLife teaches in the first paragraph on page 2 that HP MaxiLife maximizes system up-time. HP-MaxiLife goes on to teach that this maximization in system up-time is accomplished through the use of its own LCD on the front of the computer that displays status, see the fourth paragraph on page 2 of HP-MaxiLife. Therefore, to maximize reliability and system up-time HP-MaxiLife teaches to add a second LCD on the front of the computer. There is no motivation in either HP-MaxiLife nor in Mermelstein to combine these references where the result is at least one display receiving graphics channel and a service channel, as is claimed in claim 1.

Further, neither Mermelstein nor HP-MaxiLife teach how the references could be combined such that at least one display could receive a graphics channel and a service channel.

Neither Mermelstein nor HP-MaxiLife provides any motivation to combine these two references. In fact, HP-MaxiLife specifically teaches away from "at least one display receiving a graphics channel ...and a service channel ... said service channel is also used to permit said independent electronic circuit to have access to the On Screen Display (OSD) capability of said at least one display in order to display text and/or graphics" by teaching the use of a separate LCD. In addition, Mermelstein does not teach, disclose or suggest any other way to display text and/or graphics, except through the graphics channel. The only other lines to the LCD of Mermelstein are enable lines LCDON, see col. 6, lines 13-18 and LCDENA, see col. 6, lines 44-45. Thus, the combination of

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Mermelstein and HP-MaxiLife would at the very least result in two separate displays, and not the "at least one display receiving a graphics channel and a service channel ... said service channel is also used to permit said independent electronic circuit to have access to the On Screen Display (OSD) capability of said at least one display in order to display text and/or graphics" as is claimed in claim 1.

Therefore, the Applicant asserts that since there is no motivation found in either Mermelstein or HP-MaxiLife to combine these two references, claim 1 is properly allowable over these references. The Applicant's assert that, similar to claim 1, neither HP-MaxiLife nor Mermelstein contain any motivation to combine the references in the manner done so by the Examiner. Therefore, Applicants submit that claims 6 and 15 are also deemed to be patentable over Mermelstein and HP-MaxiLife.

Thus, for the reasons stated above claims 1, 6 and 15 are deemed to be patentable over the references relied upon by the Examiner. Further, dependent claims 2-5, 7-14 and 16-20 are also deemed to be patentable at least through their dependence upon an allowable base claim.

Claim rejections under 35 U.S.C. 103(a) over Memelstein in view of HP-MaxiLife in view of VESA

On page 5 of the Official Action, the Examiner rejects claims 2-3, 5, 7-9 and 16 under 35 U.S.C. 103(a) as being unpatentable over Mermelstein in view of HP-MaxiLife and further in view of 'VESA Display Data Channel Command Interface (DDC/CI) Standard' (hereinafter VESA).

With reference to claim 2, the Examiner states that the combination of Mermelstein/HP-MaxiLife as recited in claim 1 further fails to disclose the display consists of "a bi-directional serial communication link which is compatible with the I²C protocol, providing either DDC or DDC/CI communication link which is compatible with said operating system" as well as

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an I²C communication link between said independent electronic circuit and said at least one display in order to provide said electronic circuit direct access to the OSD capability of said at least one display." Then the Examiner states that "VESA teaches the use of DDC/CI offers bi-directional communication between the computer graphic host and the display device using I²C communication. Thus, the Examiner concludes it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the bi-directional communication DDC/CI of VESA into the independent electronic circuit of HP-MaxiLife in order to maximize reliability and system up time. Applicants respectfully disagree.

The Examiner is reminded of MPEP 2143.01 which states "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination" citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Further, as stated in MPEP 2143, "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure, citing *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Examiner is requested to show where in Mermelstein, HP-MaxiLife, or VESA the teaching or suggestion to make the claimed combination is found. Specifically, the Examiner is requested to point out where in either Mermelstein, HP-MaxiLife or VESA it is taught, disclosed or suggested that the use of bi-directional communication maximizes reliability and system up-time. In fact, as pointed out earlier, HP-MaxiLife teaches to maximize reliability a second LCD and HW sensor should be provided. If the Examiner can not provide support for the claimed combination, the Applicants respectfully request that the rejection of claim 2 be withdrawn.

The same arguments regarding claim 2 may also be applied to claims 7 and 16. Therefore, the Examiner is requested to provide support for the claimed combination, or withdraw the rejection of claims 7 and 16.

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Priority

In section 1 of the Official Action, the Examiner indicates that a certified copy of the priority document has not been received. However, Applicants believe that a certified copy of the priority document was submitted when the application was filed. Please see the enclosed postcard, stamped by the USPTO, indicating the receipt of the certified copy of the priority document. Therefore, the Applicants respectfully request that the Examiner check the contents of the present application to determine whether the copy of the foreign application is a certified copy or not.

Conclusion

Therefore, the application, then, is properly allowable over the prior art which has been cited. It is respectfully requested that a Notice of Allowance be issued.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

Reconsideration is requested.

I hereby certify that this correspondence is being facsimile transmitted to The United States Patent & Trademark Office, Fax. No. (703) 746-7239 on,

Aug 13, 2002
(Date of Deposit)

Sarah M. Becharac
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APPENDIX A

Abstract

Process and apparatus for communication between an Information Handling System (IHS) and a display [(21)] having On Screen Display (OSD) capability. The IHS system includes a processor [(11)] under control of an operating system, a graphics system [(22)] and an electronic circuit [(12)] which operates independently on the processor [(11)] and the graphics system [(22)]. The display receives a graphics channel [(20)] with the graphics signals. An additional service channel is used for the interaction between the host and the display, and also for allowing the independent electronic circuit to have a direct access to the On Screen Display capability of the display[;]. The service channel may be advantageously a DDC/CI communication link, and the electronic circuit may be a hardware monitoring circuit which is operational even before the booting process of the processor. No additional Liquid Crystal Display is thus required.

Claims

1. (Once Amended) Communication process between an Information Handling System (IHS) and at least one display [(21)] having On Screen Display (OSD) capability; wherein

said IHS system includes a processor [(11)] under control of an operating system, a graphics system [(22)] and an electronic circuit [(12)] operating independently of said processor [(11)] and said graphics system [(22)],

said at least one display receives a graphics channel [(20)] comprising the graphics signals generated by said graphics system [(22)] and a service channel [(19)] allowing interaction between said at least one display [(21)] and said operating system;

the process being characterized in that said service channel [(19)] is also used to permit said independent electronic circuit [(12)] to have access to the On Screen Display (OSD) capability of said at least one display [(21)] in order to display text and/or graphics independently of said processor and said operating system [(11)].

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2. (Once Amended) Process according to claim 1 characterized in that said service channel of said display [(21)] consists of a bi-directional serial communication link which is compatible with the I²C protocol, providing either DDC or DDC/CI communication support with said operating system, as well as an I²C communication link between said independent electronic circuit [(12)] and said at least one display in order to provide to said electronic circuit [(12)] a direct access to the OSD capability of said at least one display [(21)].
3. (Once Amended) Process according to claim 2 characterized in that said electronic circuit [(12)] consists of a hardware monitoring circuit displaying monitoring feedback information to the user via said service channel.
4. (Once Amended) Process according to claim 1 [4] characterized in that said graphics system [(22)] is either an AGP or PCI graphics card which is plugged into a corresponding AGP or PCI slot having at least two conductors being reversed for said I²C communication link conveying the OSD commands to be directed to said at least one display.
5. (Once Amended) Process according to claim 3 characterized in that said hardware monitoring circuit [(12)] is connected via a network to said IHS system in order to provide an alarm on Local Area Network (LAN) capability.
6. (Once Amended) Information Handling System (IHS) comprising:
 - a processor [(11)] arranged to operate under the control of an operating system, a graphics system [(22)] and an electronic circuit [(12)] operable independently of said processor;
 - at least one display [(21)] having On Screen Display (OSD) capability and including first receiving means for receiving a graphics channel [(20)] upon which graphics signals generated by said graphics system [(22)] are transmitted, and second receiving means for receiving a service channel [(19)] for allowing interaction between said at least one display [(21)] and said operating system;

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characterized in that said service channel and said display are arranged to permit said independent electronic circuit [(12)] to access the On Screen Display (OSD) capability of said at least one display [(21)] in order to display text and/or graphics independently of said processor and said operating system [(11)].

8. (Once Amended) Information handling system as claimed in claim 7 wherein said serial communication link is compatible with the I²C protocol, and provides a DDC or a DDC/CI communication interface with said processor [(11)] as well as a I²C communication link between said independent electronic circuit [(12)] and said at least one display in order to provide to said electronic circuit [(12)] a direct access to the OSD capability of said at least one display [(21)].

9. (Twice Amended) Information handling system according to claim 7 characterized in that said electronic circuit [(12)] is a hardware monitoring circuit for displaying monitoring feedback information to the user via said service channel.

10. (Once Amended) Information Handling System according to claim 8 characterized in that said graphics systems includes:

a graphics engine [(13)] for providing graphics signals to said graphics channel and a first I²C communication channel complying with the DDC/CI protocol for controlling said at least one display [(21)];

arbitration means [(14)] having a first input connected to receive said first I²C communication channel provided by said graphics engine [(13)], and having a second input for receiving a second I²C communication channel provided by said hardware monitoring circuit [(12)];

said arbitration means providing arbitration between said first and said second I²C communication links so that the hardware monitoring circuit [(12)] and the processor [(11)] can both get access to said second receiving means of said at least one display [(21)].

11. (Once Amended) Information Handling System according to claim 10 characterized in that said graphics systems is an AGP or PCI graphics card [(22)]

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which is plugged into a corresponding AGP or PCI graphics slot having at least two wires which are dedicated for the communication of said second I²C protocol communication channel.

13. (Twice Amended) Graphics system for use in an Information Handling System (IHS) as defined in claim 6 characterized by:

a graphics engine [(13)] for providing graphics signals to said graphics channel and a first I²C communication channel complying with the DDC/CI protocol for controlling said at least one display [(21)];

arbitration means [(14)] having a first input connected to receive said first I²C communication channel provided by said graphics engine [(13)], and having a second input receiving a second I²C communication channel provided by said hardware monitoring circuit [(12)];

said arbitration means for providing arbitration between said first and said second I²C communication channels so that both hardware monitoring circuit [(12)] and said processor [(11)] can get access to said second receiving means of said at least one display [(21)] without contention.

15. Display [(21)] device having On Screen Display (OSD) capability for use in an Information Handling System (IHS) including a processor [(11)] under control of an operating system, a graphics system [(22)] and an electronic circuit [(12)] operating independently of said processor [(11)] and said graphics system [(22)],

said display having one or more connectors for receiving a graphics channel [(20)] comprising graphics signals generated by said graphics system [(22)] and a service channel [(19)] allowing interaction between said display [(21)] and said operating system;

characterized by means responsive to commands in said service channel for controlling the On Screen Display capability independently of the operation of the processor [(11)] and the operating system.

16. (Once Amended) Display device according to claim 15 characterized in that said service channel consists of a bi-directional serial communication link which is compatible with the I²C protocol, and providing either DDC or DDC/CI

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communication with said operating system, as well as an I²C communication link between said independent electronic circuit [(12)] and said display in order to provide to said electronic circuit [(12)] a direct access to the OSD capability of said display [(21)].